



Pa'auilo Mauka Kalopa Community Association

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Monthly News & Updates

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February 2020 Newsletter

By Ruth Bennett, PMKCA Vice President



Rats, Slugs, and a Very Dangerous Disease

No one likes to hear the words “*rat*”, “*worm*” and “*disease*” in the same sentence. We certainly don’t like knowing that those words are in the COMMON NAME of a dangerous pathogen that is threatening Hawai’i residents, our visitors, and our pets and livestock. “Rat Lungworm Disease” is making people sick in various communities on our island, and it is showing up on the Hāmākua Coast. (To save your sensibilities, I’ll call the disease “RLWD” from now on – but you know what I’m talking about.)

RLWD affects people and animals in many parts of the world – it wasn’t invented in Hawai’i – but we are experiencing a particularly dangerous form. Because of our dubious distinction as a focal point for RLWD, Hawai’i Island just hosted the 6th International Workshop

on RLWD and the organism that causes it. The workshop brought together researchers, medical staff and veterinarians from 8 countries, along with Hawai'i community groups and agencies and, most importantly, victims of the disease and those who are dedicated to their recovery.

Members of PMKCA's Invasive Species Committee attended the conference. Our intent was to learn as much as we could and to connect with others who are dealing with the disease, so that we could begin to bring to our Pa'auilo, Kālōpa and neighboring communities the factual information, guidelines, methods, support organizations and sense of optimism that characterized the conference. We're just getting started, but we want to help combat RLWD where we all live.

Here are twelve key things we learned at the conference. We expect to be able to provide more details and introduce you to key people in some future community events.

- RLWD is relatively rare, but it's showing up in Hawai'i more often. It can make a person very, very sick, but almost everyone gets better. However, many people have lasting impacts that complicate their lives for years. It's best not to contract the disease!
- Early treatment is important. If you think you may have been exposed to RLWD, seek medical attention and INSIST on it! Physicians and ER staff are becoming better prepared to take your symptoms (severe headaches, super-sensitive skin, and others) seriously, but they are seeking better diagnostic tools and treatment guidelines.
- Treatment involves getting rid of the disease agent in a person's system as early as possible. A new, promising treatment protocol has recently been recommended by Hilo Medical Center and can be effective if given soon after exposure. Other drugs for treatment after symptoms develop are not easy to come by and are expensive (in the US). Pressure is being exerted by Hawai'i government and health agencies to help correct that. Patients are also given medications to reduce inflammation and pain. It's no fun getting through RLWD!
- Researchers in countries which have the disease (US, Southeast Asia, Australia, South America and others) – and even in countries that don't – are working hard and collaborating to understand the disease and to develop the diagnostic tools and treatments we need. Help is on the way, but will take a few more years.
- RLWD is caused by a worm, a nematode, which likes to live in

rats. Rats pass the wormlarvae to slugs (and some other “intermediate host” types). People and animals get the disease when they ingest a slug or some other creature that carries RLWD, usually by accidentally biting into an infected creature. Coqui frogs, lizards and centipedes are also known to harbor the disease agent. The research communities are working hard to discover all the ways in which the disease might be passed to us.

- SLUGS are the worst and most common carriers. Keep them out of your gardens and away from your animals as much as possible. People get sick from eating raw local vegetables, especially leafy ones, which can hide slugs and their residue. Dogs and other pets get RLWD when slugs invade their food dishes and water supply. Other animals and livestock can get RLWD in wet conditions that harbor slugs.



Semi-slug adult showing partial shell on its back.

- The worst of the SLUGS is the “Semi-slug” (*Parmarion martensi*). It carries the heaviest load of the worm larvae. The color varies, but look for the partial shell on its back. The semi-slug arrived on our island about 20 years ago (on an imported plant) and has been found almost everywhere now. Like all slugs, it likes warm, wet conditions. Learn to spot them and how to eradicate them from your environment.
- If you are in “slug-world” (while gardening, cleaning out wet areas, dealing with your animals’ environments), wear gloves to avoid coming in contact with slugs and their trails, and wash your hands. Slugs proliferate during rainy periods, so take special care after rains. Kill slugs by setting traps for them or by CAREFULLY collecting them and disposing of them.
- Support your local growers of fruits and vegetables, but insist that they practice the best methods in their fields and gardens so that they and their field workers stay safe, and so that their customers can have more confidence when they buy their

produce.

- There is no 100% safe method to clean your locally grown produce! No currently available “vegetable wash” is effective enough, although trials are ongoing to find one that works. If you love salads and vegetable-based smoothies (as I do) and buy local produce (as I do), wash and examine every single leaf separately – then wash and examine each leaf again! Maybe even three times! Or change from salads (raw) to soups. Buy local produce, and COOK them. Freezing your veggies first also kills the parasite.
- If you are using catchment water in your home, practice the most currently recommended methods for filtering your water. The guidelines are still being perfected, but current advice is to filter down to 5 microns using a Carbon Block filter, to use a UV treatment as a final stage, and to keep up on your maintenance of the catchment system! Look for more guidelines coming as soon as the research is completed.
- Watch over your animals and keep their dishes clean. If your dog or cat or horse seems lethargic, shows muscle weakness or doesn't want to be touched, you might suspect RLWD. The vets in our area have treated cases and are more aware now. If the disease is caught early, a vet may be able to use a common animal wormer more rapidly than our MDs and ERs can do for their human patients! (Don't use an animal wormer on a person. Just sayin')



Young dog shows symptoms

RLWD is a serious health risk on our island, and we are likely to see more incidents before we can get a handle on the disease. The conference showed us that the research, medical and support communities are very motivated and determined to find solutions. We also learned that the victims of the disease who bravely shared their experiences with the

conference attendees are also wrapped in the aloha shown to them by the research community, medical and support groups, care providers and their own communities. Those of us on PMKCA's Invasive Species Committee intend to provide as much assistance and compassion as we can to anyone in our area who is fighting this disease.

If you want more information about RLWD, a good starting place is the Big Island Invasive Species Committee (BIISC) which provides information and support for various invasive threats on our island. Their [website is www.BIISC.org](http://www.BIISC.org), and their phone is 808 933-3340. Look under "Pests" for their website page on RLWD. You'll find a document there that gives clinical guidelines for recognizing and treating RLWD to share with your doctor or other medical support folks. We all can participate in creating a support network of experts and professionals who are informed and prepared to take a case of RLWD seriously.

If you suspect that you or someone you care for may have been exposed to RLWD or might have its characteristic symptoms, consult your primary care physician or go to an Emergency Room. Take precautions to stay safe – but don't delay in getting medical support if you believe you might be infected.

If you would like to help our local Invasive Species Committee in combating RLWD or the other pests that threaten our communities, we would welcome your participation. You can send us an email from the PMKCA website (www.PMKCA.org/contact.html) and we will contact you soon.

Stay well by being aware, taking precautions, and getting proper care!

Next Meetings

Here's a lineup of the next few PMKCA meetings:

Thu, Apr 9, 2020 7PM PMKCA Board of Directors Meeting
Hawaiian Vanilla Co

Thu, Jul 9, 2020 7PM PMKCA Board of Directors Meeting
Hawaiian Vanilla Co

Sat, Jul 25, 2020 11AM PMKCA Annual Potluck Picnic and
General Meeting. Kalopa State Park

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